

CLAIMS

1. A method for distributing configuration information in an xDSL network that comprises network elements on certain hierarchical levels and a network managing station, the method comprising the steps of:
 - transmitting a request for configuration information from a first network element located on a first hierarchical level to a second network element located on a second hierarchical level, which second hierarchical level is above the first hierarchical level in the xDSL network but which second network element is other than the network managing station,
 - deciding, at the second network element that is other than the network managing station, whether it is appropriate to read the configuration information requested in the request for configuration information from a configuration memory of the second network element, and
 - in case it is decided to be appropriate,
 - reading the configuration information requested in the request for configuration information from a configuration memory of the second network element and
 - transmitting the configuration information that was read from the configuration memory of the second network element to the first network element.
2. A method according to claim 1, comprising the steps of:
 - as a response to receiving a request for configuration information from the first network element, forwarding the request from the second network element to a third network element located on a third hierarchical level, which third hierarchical level is above the second hierarchical level in the xDSL network and
 - examining at the second network element, whether a response is received from the third network element;
 - so that at the second network element it is decided to be appropriate to read the configuration information requested in the request for configuration information from a configuration memory of the second network element if a response is not received from the third network element.
3. A method according to claim 2, wherein at the second network element it is decided to be appropriate to read the configuration information requested in the request for configuration information from a configuration memory of the second network element if a response is not received from the third network element before the end of a certain time limit.

4. A method according to claim 2, comprising the steps of:
- in a case where a response is received from the third network element, storing a piece of configuration information contained in the response at the configuration memory of the second network element and
 - forwarding a copy of the stored configuration information from the second network element to the first network element.
5. A method according to claim 1, comprising the step of:
- as a response to receiving a request for configuration information from the first network element, applying a certain predefined rule at the second network element to decide, whether to forward the request from the second network element to a third network element located on a third hierarchical level, which third hierarchical level is above the second hierarchical level in the xDSL network, or whether to read the configuration information requested in the request for configuration information from a configuration memory of the second network element without forwarding the request from the second network element to the third network element.
6. A method according to claim 5, wherein the step of applying a certain predefined rule at the second network element to decide, whether to forward the request from the second network element to a third network, comprises a step of examining, whether the configuration information stored at the configuration memory of the second network element is older than a predefined time limit, so that the configuration information requested in the request for configuration information is read from a configuration memory of the second network element if it is found to be not older than a certain time limit.
7. A method for achieving configuration information into a network element of an xDSL network that comprises network elements on certain hierarchical levels, the method comprising the steps of:
- transmitting a request for configuration information from a first network element located on a first hierarchical level towards a second network element located on a second hierarchical level, which second hierarchical level is above the first hierarchical level in the xDSL network,
 - deciding, at the first network element, whether it is appropriate to read the configuration information requested in the request for configuration information from a configuration memory of the first network element, and
 - in case it is decided to be appropriate,

- reading the configuration information requested in the request for configuration information from a configuration memory of the first network element.

8. A method according to claim 7, wherein at the first network element it is decided to be appropriate to read the configuration information requested in the request for configuration information from a configuration memory of the first network element if a response is not received from the second network element before the end of a certain time limit.
9. A method for effecting changes into configuration information in an xDSL network that comprises network elements on certain hierarchical levels and a network managing station, the method comprising the steps of:
 - at a certain first network element that is other than the network managing station and is located on a certain first hierarchical level, receiving a command for changing a piece of configuration information that pertains to a second network element that is located on a certain second hierarchical level, which second hierarchical level is below the first hierarchical level in the xDSL network and
 - storing said piece of configuration information at a configuration memory of the first network element in a form that results from executing said received command.
10. A method according to claim 9, additionally comprising the steps of:
 - transmitting a copy of the stored configuration information from said first network element towards said second network element as a command to start using the transmitted configuration information and
 - transmitting a copy of the stored configuration information from said first network element towards the network managing station as a report of changed configuration information.
11. A method according to claim 10, comprising the steps of:
 - as a response to the reception of a report or command containing changed configuration information, checking at a third network element, which in the xDSL network is on an other hierarchical level than said first hierarchical level, whether an effected change in the changed configuration information is in accordance with a certain required authorisation for making such a change, and
 - storing, at a configuration memory of said third network element, reported changed configuration information only if all effected changes in the changed configuration information were found to be in accordance with certain required authorisations for making such changes.

12. A network element of an xDSL network, which network element is other than a network managing station and is arranged to communicate with other xDSL network elements that are located on lower hierarchical levels in the xDSL network and with at least one xDSL network element that is located on a higher hierarchical level in the xDSL network, and which network element is arranged to store configuration information pertaining to the network element;
5 wherein the improvement lies in that the network element is also arranged to store configuration information pertaining to at least one xDSL network element that is
10 located on a lower hierarchical level in the xDSL network.
13. An xDSL network comprising network elements on certain hierarchical levels and a network managing station, wherein the improvement lies in that a number of other network elements than the network managing station are arranged to store
15 configuration information pertaining to network elements that are located on lower hierarchical levels in the xDSL network than the network element at which the configuration information is stored.